

# 大地工程國際學者演講公告

## INTERNATIONAL SCHOLAR LECTURE

日期：民國 105 年 11 月 23 日(星期三) 14:00 - 15:50

地點：國立高雄應用科技大學(高雄市建工路 415 號)土木工程系二館 207 室

主辦單位：中華民國大地工程學會、國立臺灣科技大學營建工程系、國立臺灣大學  
土木工程學系、國立高雄應用科技大學土木工程系、英國土木工程學會  
(Institution of Civil Engineers, UK)

時間	主題	講者
13:45-14:00	報到	
14:00-15:30	Repair and stabilisation of infrastructure slopes (公共工程邊坡之穩定與修復)	  <b>Professor William Powrie</b> <b>University of Southampton</b>
15:30-15:50	問答與交流	

本活動免費，歡迎踴躍參加，並提供技師訓練積分申請(請提供身分證號碼)，  
相關問題，請聯絡：

國立高雄應用科技大學 熊彬成副教授(benson.hsiung@gmail.com)或賴玉宸先生(07  
3814526 EXT 5283/ 1103312140@gm.kuas.edu.tw)

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報名回條 報名表請 mail:tgstw999@gmail.com

會員編號#\_\_\_\_\_，姓名：\_\_\_\_\_，單位：\_\_\_\_\_

連絡電話：\_\_\_\_\_，Email：\_\_\_\_\_

備註：請加註參加高雄場次

### **Repair and stabilisation of infrastructure slopes**

Discrete piles are increasingly used to stabilise infrastructure earthworks slopes such as road and railway embankments and cuttings. Historically, there have been a number of uncertainties relating to how such piles behave. These include the maximum spacing at which the piles remain effective, appropriate methods of analysis especially when there is no obvious pre-existing failure surface, and the limiting lateral pile-soil pressure especially in an effective stress analysis. A further concern with clay slopes is the effect of vegetation, which may enhance stability but also cause seasonal cycles of shrinkage and swelling that adversely affect performance in serviceability terms. The talk will address these issues, with reference to geotechnical centrifuge model tests, numerical analyses, and field measurements over a period of years at a number of sites that reveal a variety of different mechanisms of vegetation / weather / slope / pile interaction.

**William Powrie** is Professor of Geotechnical Engineering and Dean of the Faculty of Engineering and the Environment at the University of Southampton. His main technical areas of interest are geotechnical aspects of transport infrastructure, and sustainable waste and resource management. He was elected Fellow of the Royal Academy of Engineering in recognition of his work in these areas in 2009. He was Principal Investigator for *Rail Research UK* (2003-2010) and *TRACK21* (2010-15), and now leads *TRACK2theFUTURE*, an EPSRC Programme Grant focused on innovative railway track design, construction and maintenance. Between 2004-2010, he chaired the Technologies Advisory Committee for Defra's £30M programme of research and demonstrator projects for new technologies for the treatment of biodegradable waste. He is the author of the widely respected and best-selling textbook, *Soil mechanics – concepts and applications*.

